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GLENN PATENT GROUP
3475 Edison Way
Suite L
Menlo Park, CA 94025

EXAMINER	
MORGAN, ROBERT W	
ART UNIT	PAPER NUMBER
3626	

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/076,961	Applicant(s) SURESH ET AL.	
	Examiner Robert W. Morgan	Art Unit 3626	

-- Th MAILING DATE of this communication app ars on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on ______ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-19* is/are pending in the application.

4a) Of the above claim(s) ______ is/are withdrawn from consideration.

5)☐ Claim(s) ______ is/are allowed.

6)☒ Claim(s) *1-5 and 7-19* is/are rejected.

7)☒ Claim(s) *9* is/are objected to.

8)☐ Claim(s) ______ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on ______ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on ______ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. ______ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ______ .
4) ☐ Interview Summary (PTO-413) Paper No(s). ______ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. In the preliminary amendment filed 7/25/02 in paper number 5, the following has occurred: Claims 2, 4, 7 and 10-14 have been amended and claim 6 has been canceled. Now claims 1-5 and 7-19 are presented for examination.

Information Disclosure Statement

2. The information disclosure filed 11/5/02 has been acknowledge and entered in the application.

Claim Objections

3. Claim 9 is objected to because of the following informalities: line 2, reads "...healthcare states for an from healthcare reimbursement claims..." should read "...healthcare states for and from healthcare reimbursement claims...". Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-2, 7, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,253,164 to Holloway et al. in view of U.S. Patent No. 6,253,186 to Pendleton, Jr. et al.

As per claim 1, Holloway et al. teaches a method and system for detecting fraudulent medical claims including an expert computer system using a set of decision-making rules

coupled to a knowledge base of facts and observations to assist the medical claims process (see: column 3, lines 30-32 and 51-54), the method comprising:

--the claimed determining a sequence of healthcare states for a client from healthcare reimbursement claims associated with the client is met by the user entering claim information into the computer system (2, Fig. 1) which are sent to a knowledge base interpreter (5, Fig. 1) for assessment of the claim and a recommendation is returned to the user as to whether the claim is proper or improper (see: column 4, lines 51-64). The Examiner considers the steps involved with processing, analyzing and verifying the claim as a sequence of healthcare states associated with advancing the claim from one state to the next state.

Holloway et al. fails to teaches:

--the claimed determining a probability of the sequence based on previously determined probabilities of individual ones of the healthcare states; and

--the claimed identifying the sequence as potentially fraudulent as a function of the probability of the sequence.

Pendleton, Jr. teaches a method and apparatus for detecting potentially fraudulent suppliers or providers of goods or services including the steps of: a) collecting data on a plurality of suppliers and providers, including data relating to claims submitted for payment by the suppliers and providers; b) processing the data to produce a fraud indicator for at least one of the suppliers and providers; and c) determining, using the fraud indicator, whether the selected supplier or provider is a potentially fraudulent supplier or provider (see: column 1, lines 49-60). Pendleton, Jr. further teaches the use of a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines

23-25). Pendleton, Jr. also teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Furthermore, any supplier or provider that exceeds the fraud indicator threshold value is stored in the NN data base file for tracking purposes (see: column 7, lines 41-47).

One of ordinary skill in the art at the time the invention was made would have found it obvious to include the fraud indicator and threshold values for detecting potentially fraudulent suppliers or providers of goods or services as taught by Pendleton, Jr. et al. with the method and system for detecting fraudulent medical claims as taught by Holloway et al. with the motivation of providing an automated system for processing a large number of claims submitting to payor to identify patterns in the claim data which may be indicative of a fraudulent provider or supplier (see: Pendleton et al.: column 1, lines 27-30).

As per claim 2, Holloway et al. teaches that a user entering claim information into the computer system (2, Fig. 1) which is sent to a knowledge base interpreter (5, Fig. 1) for assessment of the claim and a recommendation is returned to the user as to whether the claim is proper or improper (see: column 4, lines 51-64). The Examiner considers the steps involved with processing, analyzing and verifying the claim as a sequence of healthcare states.

However, Holloway et al. fails to teaches determining a probability of the healthcare state as a function of the frequency of the healthcare state in the reimbursement claims and processing healthcare reimbursement claims for a population of clients and healthcare providers for a selected time interval to identify a total set of potential healthcare states.

Pendleton Jr. et al. teaches the use of a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). Pendleton, Jr. also teaches that other approaches include computing a weighted average (reads on "determining probability and function of the frequency") of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). In addition, Pendleton, Jr. et al. teaches that historical data is extracted for a selected supplier or provider with reference to the claim analysis network over a period of time (e.g. 6 months) (see: column 12, lines 12-25).

The obviousness of combining the teachings of Pendleton Jr. et al. with the system as taught by Holloway et al. are discussed in the rejection of claim 1, and incorporated herein.

As per claim 7, Holloway teaches a method and system for detecting fraudulent medical claims including an expert computer system using a set of decision-making rules coupled to a knowledge base of facts and observations to assist the medical claims process (see: column 3, lines 30-32 and 51-54).

Holloway fails to explicitly teach the claimed each client in a population of clients, determining a transition probability for each sequence of healthcare states experienced by the client.

Pendleton Jr. et al. teach a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). Additionally, Pendleton, Jr. et al. teaches that other approaches include computing a weighted

average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: Pendleton Jr. et al.: column 7, lines 32-37). Since Pendleton Jr. et al. teach a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above and also teaches the use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: Pendleton Jr. et al.: column 6, lines 10-20). It would have been obvious to use mathematical methods to determining a transition probability for each sequence of healthcare states experienced by the client.

The obviousness of combining the teachings of Pendleton Jr. et al. with the system as taught by Holloway et al. are discussed in the rejection of claim 1, and incorporated herein.

As per claim 15, Holloway et al. teaches a method and system for detecting fraudulent medical claims including an expert computer system using a set of decision-making rules coupled to a knowledge base of facts and observations to assist the medical claims process (see: column 3, lines 30-32 and 51-54). Holloway et al. further teaches that each claim (1, Fig. 1) is entered into a computer system (2, Fig. 1) containing sufficient data processing and memory and suitable commercially available database management software programs with facts including one or more medical procedures for which payment is sought, other data such age of the patient, claim number, date(s) of treatment(s) and procedure(s), the name of physician, etc. (see: column 4, lines 23-40).

Holloway et al. fails to teach a system for creating models of healthcare claims, comprising:

--the claimed data processing module that processes a set of the claims into a date-ordered, entity specific sequences of states;

--the claimed transition processing module that determines, from the date ordered entity specific sequences, a transition metric for each transition between states; and

--the claimed entity profiling module that generates profiles for at least one entity, a transition metric for one or more sequences of states related to the entity.

Pendleton Jr. et al. teaches a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). Pendleton Jr. et al. further teaches that the claim file (26, Fig. 4) is sorted in a sort operation (46, Fig. 5) and the data is encoded in a claim data file (40, Fig. 4) (see: column 6, lines 39-53). The Examiner considers that since the claim file contains information such as claim dates and is sorted by a sort operation, this suggests that the claims are date ordered. Pendleton Jr. et al. also teaches a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Furthermore, Pendleton Jr. et al. teaches that once a supplier or provider using the fraud indicator exceeds the

threshold number the results for the subject supplier or provider are written to neural network (NN) data base file (72, Fig. 7) (see: column 7, lines 41-45). Since Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above. It would have obvious to use mathematical methods for transition metric for each transition between states and transition metric for one or more sequences of states related to the entity.

The obviousness of combining the teachings of Pendleton Jr. et al. with the system as taught by Holloway et al. are discussed in the rejection of claim 1, and incorporated herein.

As per claim 19, Holloway et al. teaches wherein an entity is one for the group consisting of: a client; a healthcare provider; a provider/client; or a procedure. This feature is met by each claim (1, Fig. 1) which is entered into a computer system (2, Fig. 1) containing sufficient data processing and memory and suitable commercially available database management software programs with facts including one or more medical procedures for which payment is sought, other data such age of the patient, claim number, date(s) of treatment(s) and procedure(s), the name of physician, etc. (see: column 4, lines 23-40).

6. Claims 3-5, 8-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,253,186 to Pendleton, Jr. et al.

As per claim 3, Pendleton Jr. et al. teaches a method for identifying potentially fraudulent or abusive treatment practices by healthcare providers, comprising:

--the claimed processing healthcare reimbursement claims for treatments provided by the providers, to determine transition probabilities for sequences of healthcare states for the treatments is met by the composite fraud indicator that is computed by averaging a plurality of

fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37);

--the claimed for each provider, determining an aggregated transition probability for all sequences of healthcare states for treatments provided by the provider is met by the statistical information which access provider stat file (90, Fig. 8) and compiled in a statistical system update (see: column 8, lines 14-17); and

--the claimed identifying as potentially fraudulent at least one provider having aggregated transition probability that is statistically different from the aggregate transition probabilities of similar providers is met by the process accumulating the data involving simply adding the fraud indicators produce for each claim line to produce a total for a particular supplier or provider (see: column 7, lines 10-14).

Pendleton Jr. et al. fails to explicitly teach transition probabilities sequences of healthcare states.

However, Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above. In addition, Pendleton Jr. et al. teaches use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). The above-mentioned healthcare states are utilized to compute the fraud indicator and threshold

values and subsequently the transition probabilities sequences from the healthcare states. The Examiner considers changes to the mathematical method for computing the fraud indicator such as using healthcare states, as parameters would produce transition probabilities sequences of healthcare states.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the mathematical method to compute the transition probabilities sequences of healthcare states within the fraud indicator and threshold values for detecting potentially fraudulent suppliers or providers of goods or services as taught by Pendleton, Jr. et al. with motivation of providing a system which is capable of processing claim data and identifying a potentially fraudulent provider or supplier (see: Pendleton Jr. et al.: column 1, lines 31-33).

As per claim 4, Pendleton Jr. et al. teaches determining an aggregated transition probability for all sequences of healthcare states for treatment provided by the provider comprises:

--the claimed for each client treated by a provider, determining a transition probability for each sequence of healthcare states including at least one treatment provided by the provider the client is met by the claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20); and

--the claimed determining the aggregated transition probability for the provider as a function of the transition probabilities determined for each sequence of each client.

Pendleton Jr. et al. fails to explicitly transition probability for each and all sequence of healthcare states.

However, Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above. In addition, Pendleton Jr. et al. teaches use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). The above-mentioned healthcare states are utilized to compute the fraud indicator and threshold values and subsequently the transition probabilities sequences from the healthcare states.

The obviousness of using a mathematical or statistical method to compute transition probability for sequences of healthcare states within the teachings of Pendleton Jr. et al. are discussed in rejection of claim 3, and incorporated herein.

As per claim 5, Pendleton Jr. et al. fails to explicitly teach:

--the claimed for each pair of states, there is a transition probability for a transition between the states; and

--the claimed transition probability for a sequence of states is the geometric mean of the transition probabilities between each state and the next state in the sequence.

However, Pendleton Jr. et al. teaches a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is

compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Since Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above and also teaches the use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). It would have obvious to use mathematical methods to compute transition probability for a transition between the states using a geometric mean. The Examiner considers changes to the mathematical method for computing the fraud indicator such as using healthcare states, as parameters would produce transition probability for a transition between the states and the geometric mean of the transition probabilities between each state and the next state in the sequence.

The obviousness of using a mathematical or statistical method to compute transition probability for a transition between the states using a geometric mean within the teachings of Pendleton Jr. et al. are discussed in rejection of claim 3, and incorporated herein.

As per claim 8, Pendleton Jr. et al. teaches a method for creating a model of healthcare states, comprising:

--the claimed receiving healthcare reimbursement claims from a plurality of healthcare providers, each reimbursement claim related to a client and healthcare treatment is met by provider stat file (92, Fig. 8);

for each client:

--the claimed extracting from the claims related to the client a plurality of treatments is met by the extraction of claim data in the first step of data collection function (see: column 5, lines 21-35);

--the claimed determining at least one sequence of healthcare states from the treatments, each state associated with a provider is met by the claim lines and the term "lines" represents request for money to be paid in return for each product or service (see: column 36-40);

--the claimed for each pair of states in each sequence, updating a frequency count of a transition from a first state to a next state is met by the process of accumulating data involves adding fraud indicators produced for each claim line to produce a total for a particular supplier or provider (see: column 7, lines 9-13); and

--the claimed for each state, determining a total count of transitions from the state to all other states based on the frequency counts is met by the process of accumulating data involves adding fraud indicators produced for each claim line to produce a total for a particular supplier or provider (see: column 7, lines 9-13).

Pendleton Jr. et al. fails to explicitly teach:

--the claimed for each state transition from a first state to a next state, determining a transition probability for the state transition as the ratio of the frequency count from the first state to the next state, to total count of transition for the first state to all other states.

However, Pendleton Jr. et al. teaches a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use

in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Since Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above and also teaches the use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). It would have obvious to use mathematical methods to compute each state transition from a first state to a next state, determining a transition probability for the state transition as the ratio of the frequency count from the first state to the next state, to total count of transition for the first state to all other states. The Examiner considers changes to the mathematical method for computing the fraud indicator such as using healthcare states, as parameters would produce each state transition from a first state to a next state, determining a transition probability for the state transition as the ratio of the frequency count from the first state to the next state, to total count of transition for the first state to all other states.

The obviousness of using a mathematical or statistical method to compute each state transition from a first state to a next state, determining a transition probability for the state transition as the ratio of the frequency count from the first state to the next state, to total count of transition for the first state to all other states within the teachings of Pendleton Jr. et al. are discussed in the rejection of claim 3, and incorporated herein.

As per claim 9, Pendleton Jr. et al. teaches a method of profiling healthcare entities, the method comprising:

--the claimed determining at least one sequence of healthcare states for an from healthcare reimbursement claims associated with the entity is met by the process of updating provider stat file (92, Fig. 14) by applying the statistical fraud analysis models (212, Fig. 14) to provider history data from the application data base (202, Fig. 14) to examine historical provider characteristics which are highly indicative or suspect behavior (see: column 36-46).

Pendleton Jr. et al. fails to explicitly teach:

--the claimed determining a probability of each sequence based on previously determined probabilities of individual ones of the healthcare states; and

--the claimed assigning to a profile of the entity a transition metric based on the probability of each sequence.

However, Pendleton Jr. et al. teaches a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines 23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Since Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above and also teaches the use of a claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20). It would have obvious to use mathematical methods to determine a probability of each sequence based on

previously determined probabilities of individual ones of the healthcare states and assigning a profile of the entity transition metric based on the probability of each sequence. The Examiner considers changes to the mathematical method for computing the fraud indicator such as using healthcare states, as parameters would produce a determination of probability to each sequence based on previously determined probabilities of individual ones of the healthcare states and assigning a profile of the entity transition metric based on the probability of each sequence.

The obviousness of using a mathematical or statistical method to determine a probability of each sequence based on previously determined probabilities of individual ones of the healthcare states and assigning a profile of the entity transition metric based on the probability of each sequence within the teachings of Pendleton Jr. et al. are discussed in the rejection of claim 3, and incorporated herein.

As per claims 10-14, Pendleton Jr. et al. teaches the healthcare states are facilities providing procedures to clients, service codes for healthcare procedures, healthcare providers, provider-days and provider-service codes. These features are met by the claim file (26, Fig. 4) that includes healthcare states such as Health Care Procedure Code System (HCPCS) code, other codes, dates, units, pricing information, total dollar amount requested, or other information (see: column 6, lines 10-20).

As per claim 16, Pendleton Jr. et al. fails to explicitly teach the claimed an analytical module that receives the profiles and identifies entities that are potentially fraudulent or abusive based at least in part upon the transition metrics contained in the profiles.

However, Pendleton Jr. et al. teaches a composite fraud indicator that is computed by averaging a plurality of fraud indicators for the selected provider or supplier (see: column 2, lines

23-25). In addition, Pendleton, Jr. et al. teaches that other approaches include computing a weighted average of the individual fraud indicators, of selecting a subset of the indicators for use in computing the composite fraud indicator. After the composite fraud indicator is computed, it is compared to a threshold number, which is based upon prior experience (block 70) (see: column 7, lines 32-37). Furthermore, Pendleton Jr. et al. teaches that once a supplier or provider, using the fraud indicator exceeds the threshold number the results for the subject supplier or provider are written to neural network (NN) data base file (72, Fig. 7) (see: column 7, lines 41-45). The Examiner considers the suppliers or providers written to the NN database file to be profiles and identities of supplier or provider that are part of potentially fraudulent or abusive practices. Since Pendleton Jr. et al. teaches a mathematical method for computing the fraud indicator using averages, weighted averages and threshold values as noted above. It would have obvious to use mathematical methods along with an analytical module that receives the profiles and identifies entities that are potentially fraudulent or abusive based at least in part upon the transition metrics contained in the profiles.

The obviousness of using a mathematical or statistical method along with an analytical module that receives the profiles and identifies entities that are potentially fraudulent or abusive based at least in part upon the transition metrics contained in the profiles within the teachings of Pendleton Jr. et al. are discussed in the rejection of claim 3, and incorporated herein.

As per claims 17-18, Pendleton Jr. et al. teaches the claimed analytical module includes a predictive model and rules based model. This limitation is met by the providers that undergo analysis using statistical screening models and a fuzzy logic analysis of model results to produce a fraud prediction model (see: column 36-58). Pendleton Jr. et al. further teaches the use of an

expert system interface engine (block 160, Fig. 12) that analyses each record of a particular provider using expert system rules (162, Fig. 12) (see: column 9, lines 35-45).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

In related art (6,529,876) Dart et al. discloses a method and a computer program apparatus for use by health care providers for the production of accurate billing codes.

In related art (6,587,552) Zimmermann provides a system for analyzing fraud in a telecommunications system, where the system comprises at least one processor, software and calling records stored in a database.

In related art (Physician manipulation of reimbursement rules for patients: Between a rock and hard place) Wynia et al. teaches that the minority physicians manipulate reimbursement rules so patient can receive care that physician perceive is necessary.

In related art (Fraud in the health insurance industry) Welch et al. examines 95 instances of fraud occurrences in the health care sector

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Morgan whose telephone number is (703) 605-4441. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m. Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (703) 305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

rwm
July 16, 2003

JOSEPH THOMAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600